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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,258	03/20/2001	John W. Garrett	2000-0184C	2600

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EXAMINER	
CLARK, ISAAC R	

ART UNIT	PAPER NUMBER
2154	5

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/813,258	GARRETT ET AL.	
	Examiner	Art Unit	
	Isaac R Clark	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-8 are presented for examination.

Priority

2. This application claims priority from Provisional Application 60190633 filed on 03/20/2000, and Provisional Application 60190633 filed on 03/20/2000.

3. The effective filing date for the subject matter defined in the claims pending in this application is 03/20/2000.

Drawings

4. The examiner contends that the drawings submitted on 03/20/2001 are acceptable for examination proceedings.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following terms lack antecedent basis:

i. "the dynamic host configuration protocol message" – claim 1, line 7.

ii. "the entries" – claim 1, line, lines 8-9.

iii. "the host configuration protocol" – claim 2, lines 1-2.

iv. "the address resolution protocol" – claim 3, lines 1-2.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (hereinafter Wong) US 6,073,178 in view of Hrastar et al. (hereinafter Hrastar) US 20010019557.

9. As per claim 1, Wong teaches a method of access control in an access network infrastructure 106 (Fig. 1) connected to a plurality of service networks (Col. 5 lines 5-10), comprising the steps of:

receiving a host configuration protocol message acknowledging allocation of a network address, associated with a service network ("DHCPACK", Col. 7, lines 40-42), to an authenticated network access device (Col. 6 lines 32-39); and

restricting access to the access network infrastructure based on entries in a table of stored IP and hardware addresses (Fig. 8; Col. 9, lines 1-19).

10. Wong teaches a creating an entry in a table in memory of IP address and hardware address information from the dynamic host configuration protocol message (Col. 7, lines 48-53) but does not explicitly teach that this table is an address resolution protocol cache. Hrastar teaches the method of claim one where the address information is stored in an address resolution protocol (ARP cache) (Paragraph 0053, modem and IP address assigned by DHCP and TCP/IP; Paragraph 0094 modem and IP address stored in ARP cache). It would have been obvious to one of ordinary skill in

this art at the time the invention was made to combine the teaching of Wong and Hrastar because they both deal with automatic assignment of network addresses to network access devices using DHCP server messages. Furthermore, the teaching of Hrastar to creating an entry in an address resolution protocol (ARP) cache using information from the dynamic host configuration protocol message would allow the entry along with other ARP cache information to be used for routing communications (Paragraph 0090).

11. As per claim 2, Wong in view of Hrastar as applied to claim 1 teaches the method of claim 1 wherein the host configuration protocol message is a DHCP message (Col. 7, lines 40-42).

12. As per claim 3, Wong in view of Hrastar as applied to claim 1 teaches the method of claim 1 wherein the address resolution protocol cache is an ARP cache (Col. 6, lines 4-6; Col. 6, lines 38-40; Col. 7, lines 48-52; cache includes MAC address plus the assigned IP Address).

13. As per claim 6, Wong in view of Hrastar as applied to claim 1 teaches the method of claim 1 wherein the service networks utilize the Internet Protocol (Col. 1 lines 64-67; Col. 8, line 43-46) and wherein the addresses are Internet Protocol addresses (Col 6, lines 7-8).

14. As per claim 8, Wong in view of Hrastar as applied to claim 1 teaches the method of claim 1 wherein the plurality of service networks offer access to different Internet Protocol-based services (Col 5, lines 6-10).

15. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Hrastar et al. (hereinafter Hrastar) US 20010019557.

16. As per claim 4, Wong in view of Hrastar as applied to claim 1 does not teach the method of claim 1 further comprising the step of flushing the entry in the address resolution protocol cache if the network address is released by the network access device.

17. Hrastar teaches the method of claim 1, further comprising the step of flushing the entry in the address resolution protocol cache if the network address is released by the network access device (Paras. 128 and 129).

18. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teachings of Wong and Hrastar because they both deal with automatic assignment of network addresses to network access devices using DHCP server messages. Furthermore, the teaching of Hrastar to remove an entry in the address resolution protocol cache if the network address is released by the network access device allows the service provider to return the released IP address to the its list of available IP addresses (Para 129).

19. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Hrastar in further view of Sugita (US 6,396,845).

20. As per claim 5, Wong in view of Hrastar as applied to claim 1 does not teach the method of claim 1 wherein the entry in the address resolution protocol cache additionally includes an expiration time set to an expiration time of the network address allocated to the network access device.

21. Sugita teaches the method of claim 1 wherein the entry in the address resolution protocol cache additionally includes an expiration time set to an expiration time of the network address allocated to the network access device (item 26d, Fig. 2; Col. lines 53-57; Col. 3, lines 33-35).

22. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teachings of Wong, Hrastar, and Sugita because they all deal with maintaining MAC and IP address pairs in an address resolution protocol cache to be used when routing traffic in a communications network. Furthermore, the teaching of Sugita of having the address resolution protocol cache entry additionally include an expiration time set to an expiration time of the network address allocated to the network would allow expiring entries in the cache individually based on their age, reducing traffic in the network necessary to replenish the cache (Col 3, lines 33-34 and lines 60-63.

23. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Hrastar in further view of of 'Official notice'.

24. As per claim 7, Wong in view of Hrastar as applied to claim 6 does not teach explicitly the method of claim 6 wherein the plurality of service networks are operated by different Internet Service Providers. However 'Official Notice' is taken by the Examiner that the broad range of server systems known in the art includes service networks operated by different Internet Service Providers. It would have been obvious to one of ordinary skill in this art at the time the invention was made to include service networks

operated by different Internet Service Providers because doing so would allow the sharing of the network infrastructure by the different Internet Service Providers.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "Service selection in a shared access network providing access control".

i. US 6,240,091 Ginzboorg et al. Authenticated access to service providers.

ii. US 6,023,724 Bhatia et al. Controlling access to network infrastructure.

iii. US 20020165972 Chien et al. DHCP and authenticated wireless network access devices.

iv. US 20010044893 Skemer Centralized control of subscriber access to user networks

v. US 6,603,758 Schmuelling et al. Authenticating Server systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac R Clark whose telephone number is (703)605-1237. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703)305-8498. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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